Based on the foregoing disclosure of the preferred embodiments of the present invention, many modifications and variations of the present invention will be apparent to those skilled in the art. Accordingly, it is to be understood that, within the scope of the appended claims, the present invention may be practiced otherwise than as specifically described above.

Claims

1. An environment manager providing for the controlled execution of respective application programs in primary and alternate application execution environments within a computer system operating under the control of an operating system including a primary input queue and a primary output routine, said environment manager comprising:

a) an alternate input queue for storing input data for applications executing in the alternate application environment;

b) an alternate output routine for managing the processing of output data provided by applications executing in said alternate application environment; and

c) a control routine coupled to said operating system to selectively provide for the concurrent use of said primary input queue and said primary output routine or of said alternate input queue and said alternate output routine, said control routine further providing for the transfer of the output data processed by said alternate output routine to said primary output routine.

2. The environment manager of Claim 1 wherein said control routine provides a display buffer area and wherein said alternate output routine provides for the processing of said output data provided by said applications executing said alternate application environment into said display buffer area.

3. The environment manager of Claim 2 wherein said alternate output routine provides for the replication of said output data provided by said applications executing said alternate application environment to a communications port for sharing with another computer system.

4. The environment manager of Claim 3 wherein said alternate input queue is coupled to said control routine for storing input data received from said another computer system by way of said communications port.

5. The environment manager of Claim 1 wherein said operating system provides a primary display area and wherein said control routine provides an alternate display area, wherein said operating system provides for a primary display structure defining the contents of said primary display area, including a frame of an alternate display window, and wherein said control routine provides for an alternate display structure defining the contents of said alternate display area, said control routine providing for the presentation of said alternate display area within said frame of said alternate display window.

6. The environment manager of Claim 5 wherein said alternate input queue stores input data correlated to said alternate display window.

7. A computer system providing for the alternate execution of first and second sets of application programs, said computer system comprising:

a) a processor including an input device and an output device;

b) an operating system executable by said processor to support the execution of programs, said operating system including a graphical user interface coupleable through an output driver to said output device and an input interface including an input queue coupleable through an input driver to said input device, said operating system including a first list of a first set of application programs executable by said processor and a second list of application program windows corresponding to said first set of application programs; and

c) an environment manager executable by said processor including a third list of a second set of application programs and a fourth list of application program windows corresponding to said second list of application programs, execution of said environment manager providing for the inclusion of said environment manager in said first and second sets and for selectively swapping with said operating system said first and third lists and said second and fourth lists to switch between the execution of said first and second sets of application programs.

8. The computer system of Claim 7 wherein said environment manager determines to swap between the execution of said first and second sets of application programs based upon the relative amount of data in said input queue for said first and second sets of application programs.

9. The computer system of Claim 7 or 8 wherein said environment manager determines to provide said operating system with an alternate output driver to couple said operating system to said output device, said alternate output driver providing for the processing of output data provided through the execution of said second set of application programs.

10. A method of executing computer application programs in primary and alternate application execution environments in a computer system under the control of an operating system wherein input events are provided through the operating system to application programs and wherein output events are provided to a display driver, said method comprising the steps of:

a) establishing a primary display driver for receiving and processing output events provided from a first application program executing in a primary application execution environment;

b) establishing an alternate display driver for receiving and processing output events provided from a second application program executing in an alternate application environment;

c) selecting for execution by said computer system, subject to the control of the operating system, a predetermined one of said first and second application programs; and

d) selectively providing an output event to said primary display driver reflecting the output events provided from said application programs executing in said alternate application environment.

11. The method of Claim 10 wherein input events to the operating system include a plurality of types of input events distinguished by source identifying data, said method further comprising the steps of:

a) receiving a predetermined input event for said second application program;

b) providing for the scheduled execution of said second application program; and

c) providing for the coupling of said alternate display driver to said operating system to receive and process output events upon scheduled execution of said second application program.

12. The method of Claim 11 wherein the operating system includes a communications path to another operating system, said method further comprising the steps of:

a) duplicating output events provided to said alternate display driver; and

b) sending said duplicated output events to said communications path for transfer to said another operating system.

13. The method of Claim 12 further comprising the steps of:

a) receiving primary and alternate input events, said alternate input events including input events received from said communications path;

b) providing said primary and alternate input events to said operating system with respective predetermined identifications; and

c) distinguishing between said primary and alternate input events in selecting among said first and second application programs to schedule for execution by said computer system.

14. The method of Claim 13 wherein said step of distinguishing includes the steps of:

a) associating said primary and alternate input events with primary and alternate execution environments;

b) identifying a predetermined application within either of said primary and alternate execution environments for receipt of a predetermined input event; and

c) establishing said predetermined application as ready to run within either of said primary and alternate execution environments.

15. A method of operating a computer system suitable for the execution of application programs, said method comprising the steps of:

a) providing a first window list structure defining the logical appearance of a first set of display windows associated with a first set of application programs;

b) providing a second window list structure defining the logical appearance of a second set of display windows associated with a second set of application programs;

c) providing for the drawing of the logical appearance of said first set of display windows in a display space; and

d) providing for the drawing of the logical appearance of said second set of display windows within a predetermined display window included within said first set of display windows.

16. The method of Claim 15 wherein said first and second sets of application programs are executed by a host computer system and wherein said method includes the steps of:

a) maintaining the logical appearance of said first set of display windows private to said host computer system, exclusive of said predetermined display window; and

b) sharing the logical appearance of said second set of display windows with a quest computer system.

17. The method of Claim 16 wherein said first and second sets of application programs are responsive to input events, said method further comprising the steps of:

a) independently managing input events for said first and second sets of application programs; and

b) independently identifying respective predetermined applications of said first and second sets of applications for receipt of input events.

18. The method of Claim 17 wherein said step of independently managing input events includes the steps of managing first and second input queues for said first and second sets of applications, respectively.

19. The method of Claim 18 further comprising the steps of:

a) receiving a predetermined input event;

b) identifying the destination of said predetermined input event as being a predetermined application within either of said first and second sets of applications;

c) storing said predetermined input event in a corresponding one of said first and second input queues; and

d) updating said predetermined application to be ready to run.

20. The method of Claim 19 further comprising the steps of:

a) determining to execute said predetermined application;

b) selecting a corresponding one of said first and second window list structures for use in connection with the execution of said predetermined application;

c) establishing said operating system to draw within a corresponding one of said display space and said predetermined window in connection with the execution of said predetermined application.